



YOU'LL JUST HAVE TO WAIT A MINUTE -  
CAN I HELP IT IF THIS IS THE ONLY  
HOT SPOT IN THE HOUSE?

*Ham Radio News From Central Indiana*

Volume X No. 6

June 1994

## Upgrades: VE Testing May 21, 1994

David Baker	N9PVE	Greenfield	Advanced
Tony Elkins		Brownstown	NC Tech
Helen Hanner		Indianapolis	NC Tech
Gary Jackson		Indianapolis	NC Tech
David Norris	N9RSN	Indianapolis	Advanced
Dinette Tanner		Indianapolis	NC Tech

## RACES Drill to be held in June

All agencies of Johnson County will conduct a Toxic Material Incident Drill on the 29th of June 94. Agencies involved are Emergency Management, Law Enforcement, Hospital, RACES, etc. JCEM-RACES will be activated from 0900 hrs till early afternoon.

Each agency will be evaluated. Races members wishing to participate contact WB5VZT ASAP to be included in the participation list.

This will be a needed training and evaluation event. Lunch will be served. Each RACES member participating will receive an information sheet from WB5VZT.

Thank You, Bob De Spain  
WB5VZT Asst. Races Officer.

## More computer hackers

On the international scene, word that German police have cracked down on a nationwide ring of computer hackers who found a way to telephone around the world without being billed.

The regional criminal office in Munich said U.S. telephone companies alone had suffered millions of dollars in lost revenue because the ring had used computers to tap into networks illegally and make phone calls.

In a coordinated search, police raided the homes of about 60 suspected hackers all over Germany. Some were identified as being ham radio enthusiasts, though no call signs were given.

## New Hampshire to de-regulate Hams

It's now law in New Hampshire!

New Hampshire House Bill 1380, recently signed into law by Governor Steve Merrill, exempts from real estate property taxes "radio towers, antennas, and related or supporting structures used exclusively in the operation of an Amateur communications station under Federal Communications Commission Amateur Radio Service rules and regulations."

ARRL Counsel Chris Imlay, N3AKD, called the bill "an important precedent," saying that it may have far reaching effects throughout the US as amateurs continue to seek relief from local and state regulation.

ARRL New Hampshire Section Manager Al Shuman, N1FIK, who played a key role in the passage of the bill, largely credits ARRL New Hampshire State Government Liaison (and representative in the state legislature) Ralph Rosen, W1HSB, and a team of ARRL Field Organization volunteers, who testified numerous times before both House and Senate committees.



## RACES: When to activate

The "declared emergency concept" is a fifty-year old hold-over of the long-gone idea that RACES was to be a special service in which Amateurs would operate in wartime, hence a "declaration" by the president.

Today, the understanding and use of RACES is quite different. It is NOT necessary that there be a declaration of an emergency in order to activate RACES. It is activated in countless emergencies without a declaration having proceeded that activation. All it takes is authorization by the person named in the RACES plan for that purpose. A simple "can you call in some of the RACES people" is all it takes.

A declaration, when and if utilized, is to invoke laws such as those that provide access to state or federal funds. If there is no need for that declaration, the agency responds anyway, and so can RACES. In fact, there are emergency management agencies that activate their RACES the moment they activate any other staff personnel; even in a potential emergency, such as a hazmat spill of unknown materials.

Nonetheless, there are still those who carry this idea firmly entrenched in their minds as the result of misinformation in various publications, so the situation warrants review.

From time to time we see this statement: "Once the emergency is recognized by a state or federal

agency it becomes a "declared emergency". That is false, as it implies that the local jurisdiction has no control, when in fact it is the local jurisdiction that may first declare the emergency in order to gain outside help.

Further, the recognition of an emergency is not in and of itself a declaration. A declaration is a proclamation for certain legal purposes, not activation of the RACES.

It is important to realize that a declared emergency may NOT invoke the call-out of a RACES unit any more than a non-declared emergency. NEED determines call-out, not "declaration".

-RACES BULLETIN 329 W6WWW

## Ham forums to be in local area

Plans are right now to have what is currently being called the Columbus Area Amateur Radio Conference (CAARC) on Saturday, July 16 at IUPUI Columbus. Wayne, N9MUS and I are trying to setup a timetable for forums during the day. We hope to have enough topics to fill from 10AM until at least 5PM. We plan to have at least these topics:

- ARES - RACES - Packet Radio - MARS - Area Clubs

There will also be tables available to area clubs to display their information and applications. All hams in Johnson County are invited, but the plans are preliminary, so don't set them in concrete, yet.

## FCC: Indecent Broadcasts

In the nations capitol members of Congress are telling the Federal Communications Commission that it should impose higher fines on broadcasters who use indecent language on the air.

The FCC has already fined shock-jock Howard Stern and the company that broadcasts his programs over \$1 million for using indecent language in his programs. Stern and the company are appealing the fines, saying they violate free speech protection.

But FCC Chairman Reed Hundt is saying that even if higher monetary forfeitures are mandated, the commission lacks the resources to handle all its responsibilities.

Hundt told a House of Representatives Appropriations subcommittee hearing that a staff shortage was hindering efforts to handle license and merger applications.

## Bailout

A pilot was flying an old biplane over some farmland. Unfortunately, its engine caught fire. Fortunately, the pilot was able to bail out. Unfortunately, his parachute failed to open.

Fortunately, there was a large haystack on the field below. Unfortunately, there was a pitchfork sticking up out of the haystack.

Fortunately, the pilot missed the pitchfork. Unfortunately, he also missed the haystack.

By K17SY in the Garden City Wireless.



## Are all Emergency Communications Legal?

Of course, all emergency communications are legal. Yet, due to folklore and second hand anecdotes, emergency and public service communications have become a confusing topic for many amateurs. A surprising number believe that much of our public service and disaster communications are illegal.

Here are some examples:

During August and September 1987, nearly 700 square miles of California forest lands were destroyed by wildfire, causing the evacuation of tens of thousands of mountain residents. Hundreds of ham operators provided support communications for the U. S. Forest Service, the California Department of Forestry, the American Red Cross, and other relief agencies.

Once the fires were out, several hams were heard asking, "Were we legal? Or, were we conducting the regular business of these relief agencies?"

That this question was asked at all, under the circumstances, illustrates the confusing interpretations of FCC rules within the amateur fraternity.

In some instances, the misunderstandings about emergency communications have irreparably tarnished the image of Amateur Radio. At a recent 200 mile bike ride, a "sag wagon" with Amateur Radio communications arrived on

the scene of a serious accident. A volunteer paramedic had already arrived to administer first aid.

Due to the extent of injuries, the paramedic asked to confer with a physician who happened to be in the vicinity of net control. Strangely, the net control refused to allow the physician to speak directly over the radio!

In spite of complicated medical terminology and the potential for mistakes, the net control operator insisted on verbally relaying each message. The control operator said he wasn't sure if it would be legal for the paramedic to speak directly with the physician.

Unfortunately this paramedic is a volunteer with a search and rescue group that needs Amateur Radio support. But, based on this tragic episode, they have chosen to avoid ham radio, because, the paramedic said, "It's unreliable."

## Radio club to change name

The RCA Radio Club of Indianapolis, Indiana has been renamed the Thompson Amateur Radio Club for two reasons. First, it is the French owned Thompson that actually manufactures RCA brand label consumer products in North America.

Second, the General Electric Company owns the rights to both the RCA name and the well known RCA dog and phonograph logo which have been on the masthead of the club newsletter.

## ARRL to make dues hike

Effective June 1st dues for membership in the ARRL will be Forty seven dollars (\$47.00). Costs escalate and the need for additional funding is at hand. We at HQ regret having to do so at this time - yet we know hams are understanding and will gladly absorb the increase. For those who have existing memberships - an amended bill will be sent by June 15th.

## ARRL License service starts

The ARRL has now begun mailing amateur radio license expiration notices to its members. The notices, including an envelope addressed to the FCC's processing facility in Gettysburg are sent 90 days before the license expiration date and are generated from the official FCC database.

## Thanks, Tigor!

On behalf of Sam Williams and the Mid-State Amateur Radio Club we would like to thank Tigor Title Insurance of Franklin for the donation of 2 IBM XT computers with monitors, three printers, and some attractive and comfortable swivel chairs.

This addition to the club room will give us some back-up for our packet program and provide a comfortable atmosphere for our control operators during RACES emergency operations.



# The "Mighty 525"

Has the idiot factor reached the 50 percent level? Is it time to pull the plug on the "Mighty 525 machine?"

Possibly! As many central Indiana hams have been hearing, the 145.250 repeater has been having it's share of troubles. According to Bob Hawkins, WA8VZY, a resistor caught fire in the high voltage power supply and shut the 525 down.

It was the first time in 12 years the southside repeater has been off the air for more than a few hours. The pause in repeater activity gave Bob a chance to reflect on the past and future of his mighty machine.

The "525" began operation as a local repeater on May 5, 1982. Two months later, on July 4th, the first belch echoed across the airwaves.

That was not the last of the QRM. It, in fact, has become more common over the years. It's a problem that has frustrated most users of the "525". "It's been a growing problem," Hawkins said, "and now has me wondering if it's worth leaving the repeater in service."

Over the years Hawkins has built the local repeater into a mighty communication link serving central Indiana. It boasts 13 satellite receivers and the maximum output power allowed by the FCC. Today, following the fire, it's been reduced to only 60 watts output power. And it's future is in question!

Hawkins says, "The lack of financial support does not bother me as much as all of the malicious interference and the growing number of discourteous hams using the 2-meter air waves".

As Hawkins puts it, "When the idiot factor exceeded 50%, it just became no fun running a repeater". Hawkins longs for the good old days when ladies and gentlemen used the repeater and contributed financially to it's success.

So, what is the future of the "Mighty 525"? Hawkins says he will make a decision in the next few months. Bob admits that a private repeater for a select few is looking more inviting each day. But, no matter what he decides, the 145.250 will not go silent.

All current members are welcome to contact Bob if they wish to have their dues returned. He will not have the "525" booth at the July hamfest.

No matter what repeater you use let's hope that we all get back to using the proper operating procedures and somehow eliminate the QRM. Who knows, maybe even the 145.250 repeater may some day return to it's historic glory and echo the call of the "MIGHTY 525".

--NT9J.

Ed. Note: This article is the result of an interview with Bob Hawkins, WA9VZY by NT9J

## Field Day 1994 Update

Field Day is one of the most important activities of the club. This year J.R. Osborne KB9HSE is in charge and committees have been appointed. Final details will be discussed at the June meeting. Members are urged to attend and volunteer.

### Equestrian event

Thanks to everyone who volunteered to help with the annual Indiana Combined Training Association event at Camp Atterbury during the first weekend in June. Unfortunately, we were never able to make contact with any of the association officials to confirm if our amateur communicators were needed. All I can say is, it's their loss.

We are still planning on assisting another equestrian organization in August with their cross county event. I will pass that information along as soon as it becomes available. For now, "Happy trails to you, until we meet again". - NT9J.

**Do you recognize this club member?**



**He's active and attends most of our club meetings.**

**The mystery member last month was KB9HSE**



# What will it cost?

By Steve Ford WB8IMY

Wouldn't it be great to explore every nook and cranny of our vast hobby? You'd spend a lifetime doing it--along with a fair amount of cash! Before you commit yourself to new operating modes and new equipment, better take a look in your wallet.

If I ever win the Connecticut Lottery, I'm going to buy 10 acres of wide-open real estate and plant an aluminum forest of 100-foot towers behind my new home. Two towers will be dedicated to my HF beam antennas--one antenna for each band from 40 to 10 meters. The other towers will hold beams for every VHF and UHF band all the way up through 1296 MHz--including my satellite antennas.

The entire second floor of the house will become my Amateur Radio station. Computers and rigs of various types will occupy almost every square inch. An ATV studio will . . .

Wait a minute. Time for a reality check!

My odds of winning the lottery are nearly the same as my odds of walking on the moon. In truth, I'm on a restricted budget--just like most hams. As much as I would love to pour my limited funds into new Amateur Radio gadgetry, I have other priorities such as food, clothing and shelter.

When it comes to new equipment, each purchase requires a careful financial analysis. Can I afford this toy without changing my address to: Somewhere Under a Highway Overpass, Anytown, USA?

As a service to new hams (or veteran hams who want to expand their horizons), I offer the following list of several popular Amateur Radio activities. Each section is a summary of the necessary equipment along with the average cost of each item.

Average is the operative word when you scan the equipment lists. If you shop carefully, you can probably beat these prices by a healthy percentage. If money is no object, you can spend much more and buy top-of-the-line models.

Note that my analysis covers new equipment only. If you really want to save cash, look for good used gear. By purchasing used instead of new, you can shave the costs by about 50%, if not more. Buying used equipment is an art unto itself with its own potential pitfalls.

As you review the lists, you'll notice some repetition. For example, an SSB/CW HF radio may appear in more than one list. This simply means that the rig can be used for more than one type of activity. (HF radios and computers are characteristically multipurpose devices.) Of course, if you already own one of the items in a particular list, deduct it from the total cost.

There are some items you won't find on any lists--such as test equipment, feed lines and so on. They have an impact on the total cost, but the purchase possibilities are too numerous to consider here. So here is your wish list, salted with an ample dose of reality. Put your credit cards and check book in a safe place until you've finished this article.

## HF CW/SSB (80-10 meters)

Description: Voice and CW communications on the HF bands.

SSB/CW transceiver and power supply: \$1500

Antenna: \$400 (triband beam) \$60 (multiband trap dipole) \$300 (vertical) Antenna tuner: \$300 (optional) Tower and rotator: \$1500 (50-foot tower)

If you demand tower-mounted, high-performance antennas, you can sink a large wad of money into a beam, tower and rotator. If you don't mind the performance trade-off, an antenna tuner and a dipole will serve you nicely--and save you about \$2500.

Another alternative is to try low-power (QRP) operating. QRP transceivers typically cost \$200 to \$500 and power supply requirements are minimal. However, most QRP rigs operate CW only and few have multiband capability.

## 2-meter FM (HT and mobile)

Description: Voice communications on the 2-meter band. FM transceiver: \$400 (mobile) \$300 (HT) Mobile antenna: \$50 Base antenna: \$60

You can cut some corners on antennas here, too. If you're willing to settle for a basic, 1/4-wave ground-plane antenna at home, you can buy one for about \$20. A 1/4-wave mobile antenna with a magnetic base can be yours for only \$25.

HTs (hand-held transceivers) are obviously less expensive than mobile radios. Each has advantages and disadvantages. HTs are convenient and versatile, but they lack the power for reliable, wide-area coverage. Even with a base antenna at home, you may need an amplifier to extend your range--particularly on simplex. Mobile rigs lack portable convenience, but they have plenty of power and are usually loaded with features not found in HTs.

## PACKET RADIO (2 Meter FM)

Description: Digital communications on the 2 meter band.

(over)



**FM Transceiver:** \$400 **Antenna:** \$60 **TNC:** \$130 **Computer System:** \$1000

The transceiver price assumes that you'd use a typical mobile rig. However, many packeteers use HTs with outstanding results. If you have a node or digipeater nearby, you can even use an HT with a rubber duck antenna!

Computer prices are so unstable, it's difficult to pinpoint an average cost. For \$1000 you should be able to obtain a 386 PC with about 2 megabytes of memory, a hard drive and a VGA monitor. Enterprising computer shoppers can probably cut about \$300 from that figure. If you want a deluxe, high-speed 486 PC, or a well-equipped Macintosh, expect to fork over about \$2000.

#### **RTTY/AMTOR/PacTOR**

**Description:** Digital Communications on the HF bands **SSB/CW transceiver:** \$1500 **Antenna:** \$400 (triband beam) \$60 (multi-band trap dipole) \$300 (vertical) **Antenna tuner:** \$300 (optional) **Tower and rotator:** \$1500 (50-foot tower) **Computer system:** \$1000 **Multimode communications processor (MCP):** \$300

I'm listing a complete HF station because some hams may want to jump straight into HF digital communications without owning a single piece of equipment. Most hams, however, already have a few of the items shown above.

The heart of any HF digital communications station is the multimode communications processor, or MCP. The MCP acts as the middleman between the radio and the computer. It translates computer data into shifting audio tones (or MARK/SPACE pulses) for the radio. It also decodes received audio into data and sends it to the computer.

Once again, you can save a great deal of money by using a simple dipole antenna strung

between a couple of trees. Towers and beams are wonderful things, but they can wait until later.

#### **SLOW-SCAN TV (SSTV)**

**Description:** Video communications on the HF bands **SSB/CW transceiver:** \$1500 **Antenna:** \$400 (triband beam) \$60 (multi-band trap dipole) \$300 (vertical) **Antenna tuner:** \$300 (optional) **Tower and rotator:** \$1500 (50-foot tower) **Computer system:** \$1000 **SSTV encoder/decoder card:** \$200 **TV camera (black and white):** \$100

Do you own a video camcorder? If so, you also own a camera suitable for SSTV. Like other HF stations, the towers and beams are luxury options. A computer system is a must and a PC or compatible is highly recommended.

#### **AMATEUR TELEVISION (ATV)**

**Description:** Video communications on the 420- and 902-MHz bands. **ATV transceiver:** \$500 **TV camera:** \$100 (black and white) **UHF beam antenna:** \$120 **Tower and rotator:** \$1500 (50-foot tower) **UHF amplifier:** \$350

If you own a video camcorder, scratch the cost of the camera. You can also dispense with the tower and rotator if you have an ATV repeater nearby. Just mount the antenna on your roof and point it at the repeater! With an ATV repeater in the vicinity, you can also forget the UHF amplifier.

#### **6-MTR/2-MTR VHF SSB/CW**

**Description:** Voice and CW communications on the VHF bands **6- or 2-meter transceiver:** \$600 **6- or 2-meter beam antenna:** \$200 **Rotator:** \$200 **6- or 2-meter amplifier (160 watts):** \$300 **Tower:** \$1500 (50-foot tower)

If you're going to do serious signal chasing on the VHF bands, you need a beam

antenna--the larger the better. A rotator is also a necessity. Do you need a tower? Not really. Many weak-signal VHF enthusiasts do a fine job with roof-mounted antennas. Others take their equipment on the road, traveling to the tops of hills or mountains for a day or two of VHF DXing at a time.

With a few exceptions, it's uncommon to find a transceiver that offers 6 and 2 meters in one enclosure. The same is true of amplifiers. Depending on your budget, you may have to choose one band or the other at the beginning. An alternative is to use the HF SSB/CW transceiver you may already own in combination with a transverter. A transverter converts the HF signal to VHF, and vice versa. Transverters will set you back about \$200 to \$300 per band.

#### **SATELLITE--OSCAR 13 (Mode B)**

**Description:** SSB/CW communications via the OSCAR 13 satellite **2-meter/70-cm full-duplex transceiver:** \$1600 **Antennas and azimuth/elevation rotator:** \$600 **100-watt, 70-cm power amplifier and power supply:** \$400 **2-meter receive preamplifier:** \$100 **Computer system:** \$1000

OSCAR 13 is Amateur Radio's DX satellite. With its high, elliptical orbit, it permits communications over vast areas of the earth. The disadvantage of its high orbit is that you need 2-meter and 70-cm beam antennas (typically 11-element or larger models) and a reasonable amount of RF output to reach the satellite reliably. The antennas must be mounted on a azimuth/elevation rotator. This type of rotator moves the antennas up and down as well as side to side.

Mode B means that you transmit on the 70-cm band and listen on the 2-meter band. You can purchase a separate 70-cm and 2-meter rigs, or simply buy a



combination 2-meter/70-cm radio designed for full-duplex satellite operating. The price shown reflects the average cost of a combo rig.

If you use manual tracking, the computer system becomes optional. Most satellite enthusiasts use computer tracking software, however. You can also purchase an interface that permits your computer to adjust your antennas automatically. If you choose this option, add about \$200 to the computer system cost.

#### SATELLITES-1200 bit/s Pacsats

Description: Digital communication via satellite 2-meter/70-cm full-duplex transceiver: \$1600 Antennas: \$200 70-cm receive preamp: \$100 Satellite TNC: \$350 Computer system: \$1000

There are several packet-radio satellites (Pacsats) in orbit. Most are low-earth orbiting satellites, or LEOs. Because of their low orbits, you won't need directional antennas or rotators. There are several 2-meter and 70-cm omnidirectional antennas on the market. The circularly polarized models do a very good job with these satellites. If you need to trim costs, less expensive ground-plane antennas can be used.

You need the ability to transmit on 2-meter FM and listen on 70-cm SSB simultaneously.

The list indicates the cost of a typical combo transceiver, but you can use any 2-meter FM rig for the uplink and any 70-cm SSB receiver for the downlink. If you own a 10-meter SSB transceiver, you can add a receive converter to enable it to receive 70-cm signals. Good-quality receive converters cost around \$200.

The heart of this station arrangement is the satellite TNC.

You can buy a complete satellite TNC (such as the PacComm PSK-1T), or buy a PSK modem and wire it into your existing packet TNC.

A couple of 9600 bit/s Pacsats are also in orbit. To use these birds, you must transmit on 2-meter FM and receive on 70-cm FM. The transmit and receive radios require modification to receive the wide-bandwidth data signals. A special 9600 bit/s modem is also necessary for your TNC.

#### SATELLITES--RS-10

Description: SSB/CW communications via satellite 10-meter transceiver: \$200 (such as a Uniden, Ranger or Radio Shack rig) 2-meter SSB/CW transceiver: \$600 2-meter ground plane antenna: \$30 10-meter dipole antenna: \$15 Computer system: \$1000

RS-10 is the most popular satellite for beginners. During each 15- to 20-minute pass, it offers repeater-like coverage spanning most of North America (depending on the satellite position). Its strong signal and sensitive receiver make it easy for any ham to use. An omnidirectional antenna is adequate for the 2-meter SSB/CW uplink and a simple dipole is fine for the 10-meter downlink.

The computer system is used for satellite tracking. If you resort to manual tracking, you can save about \$1000.

#### CONCLUSION

No one said that Amateur Radio was the least expensive avocation on the planet. Even so, you can soften the impact on your bank account by using the following tips:

Do not buy on impulse. You may drool at the first sight of a beautiful piece of equipment, but don't make a hasty decision.

Take the time to check with several dealers and find the lowest price. Look in the mail-order catalogs, too. With a little patience, you may save a substantial amount of money.

Shop at hamfests. Amateur Radio equipment dealers attend many of the larger hamfests and they often offer special prices on new equipment. If you're in the market for computer hardware, check out the computer shows that pop up from time to time. You'll find some tremendous bargains there.

Sell your current equipment. There is always a market for good used gear. By selling off some of your older equipment, you can accumulate enough money to take the sting out of a new purchase.

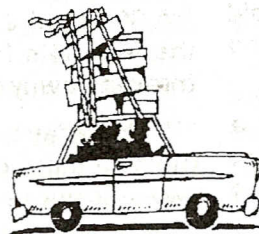
Save your money. I know this sounds like common sense, but you'd be surprised at how many people neglect this option. Let's say you want to buy that \$350 satellite TNC. If you put away \$50 a month, the TNC will be yours within seven months.

Don't buy more than you need. When you're evaluating equipment, beware of the bells-and-whistles syndrome. For example, it's easy to be captivated by a 2-meter FM radio that includes every feature known to mankind. But think for a moment. Do you need dozens of programmable memories? Do you need paging capability? Do you need to receive out-of-band signals? If the answer is "no," look for a less expensive, less feature-packed radio.

EDITORS NOTE- This article is printed for use by our members who might be considering some of these modes and need to have a "ball-park" figure of the cost. Members are also encouraged to check with other club members about prices and available used equipment.



Be sure  
to take  
your  
radio!



By Mike Bertrand N7ZZJ

An unusual squeak came from the left rear wheel, but I ignored it. This was our vacation. The previous day we had come from Carson City, Nevada to Kingman, Arizona, bound for our relatives' place in Cottonwood, Arizona. Flagstaff was ten miles behind. We were hot and tired. We had come this far and we were not going to stop or turn around.

But in the next ten miles, the noise grew louder. When I pulled over, I found a red-hot brake drum and grease oozing between the lug nuts. We needed a tow-truck, and we were miles past the last off-ramp, in Arizona's version of Nevada's "Loneliest Highway." And it was getting lonelier every minute, as passing tourists smiled but kept moving.

The nearest town was Sedona, fifteen miles away. I pulled out my 2-meter handheld, plugged it into the linear, and began scanning, but I was sure there was no one out there. Yet my wife remembered someone in our club mentioning a repeater on Mingus Mountain. I found it in the repeater directory, tuned to 147.00, and heard people talking. Hooray!

I broke in and soon found myself relating our predicament to W7WGW. He handled the situation like a net control operator, getting

all the details, calling my relatives to come get us, and reporting back to me. He also handled traffic from other hams who gave advice on where my car could be serviced, advice that proved invaluable. There was a dealer only five miles from where my relatives lived who could service my Mitsubishi.

When all was done, W7WGW returned the repeater to normal operations. It felt good to know we were not alone on that desert highway! We were glad to be part of the family of Amateur Radio, and even more glad we hadn't left home without our 2-meter rig!

## Hi or Ho, Ho?

By Tom Mansfield G3ESH

If you use the plural "73s" instead of the correct "73" you're merely annoying other operators, whereas if you frequently use "HI" or "HI HI," you may be dangerously inflating the blood pressure of purists. Presumably those who use HI, or its variants, take refuge in the lists of abbreviations published in the ARRL and RSGB operating manuals, which define HI as meaning laughter.

When sent by CW, HI conjures a picture of the sender having a good chuckle. Unfortunately, those who use HI, etc. in phone QSOs rarely precede it by anything even remotely humorous. They appear to be exercising a habit in the same way that people tack speech emphasizers such as *there* onto the end of a statement.

Or perhaps it is the listener who is supposed to laugh in response to HI; but this suggests a listener

either too thick to recognize a gem of humour when he hears it or someone conditioned to respond to Pavlovian stimuli.

The Concise Oxford Dictionary defines HI as an interjection or ejaculation—hardly a definition of laughter, whereas HO, or HO HO, is said to be an expression of surprise or derision. ~~This~~ says something about the Hollywood stereotype of Father Christmas waving his collection box in the streets.

Also, the Phillips Code For StenoTelegraphy—that definitive list of more than 4,000 abbreviations for professional telegraphists—shows HI as meaning "high", HO for "hold", and LAF for "laughter." How then did HI come to mean laughter among hams? For what it is worth, here is my theory:

In the original code devised by Samuel Morse, and in the subsequent American Morse Code, the letter "O" comprised two dots with a slightly lengthened pause between them (\* \*), which one can easily mistake for "I." Old-time telegraphers adopted HO as an abbreviation for laughter in their informal chats, while retaining LAF for message traffic.

The relaxed atmosphere of these exchanges led to the "O" sounding like "I" at high speed, so HI rather than HO, got carried over into the International Morse Code. Early Radio Amateurs, many of whom were professional telegraphists, subsequently picked it up and it remains with us to this day. HI HI.

from Groundwave, journal of the Wimbledon District ARS





\*\*\* An artist went to the gallery that was selling his paintings. The owner said, "I have good news and bad news for you."

"What's the good news?"

"A man came in and asked me if the price of your paintings would go up if you were dead. I told him they would and he bought all your paintings."

"What's the bad news?"

"He was your doctor!"

\*\*\* His wife told him to change the baby so he brought home a different kid.

\*\*\* He was a bachelor so long, his favorite dish was a clean one.

\*\*\* Figures don't lie, but girdles sometimes redistribute the truth.

\*\*\* Two zebras stand outside in the rain while Noah moves the animals aboard the Ark. One zebra says, "Why alphabetically?"

\*\*\* A mother owl tells her youngster, "How many times must I tell you- it's *whooo* not *whoom!*"

\*\*\* It's no fun being the boss. You have to come in early to see who comes in late.

\*\*\* A man walked into a bar and asked for a drink. The bartender said, "Sorry, Sir. This is Election Day. We're closed."

The man said, "So you're forcing me to vote sober?"

\*\*\* When arguing with a stupid person, make sure he isn't doing the same.

\*\*\* A woman advertised for a husband. The next day she got fifty replies, all saying the same thing: "You can have mine."

\*\*\* America is the only country where a housewife hires a woman to do her cleaning so she can do volunteer work at the day-care center where the cleaning woman leaves her child.

\*\*\* The landlord gave the tenant two days to pay the back rent. The tenant said, "OK, I'll take the Fourth of July and Christmas!"

\*\*\* The next war will be over in two hours. That'll still give us our evening free.

\*\*\* A woman accompanies her husband to the doctor and waits while he gets a physical. After the examination, the doctor comes out and says to the wife, "I don't like the way your husband looks."

The woman says, "Neither do I, but he's good with the children."

\*\*\* "Why did Jack lose his job at the M & M's factory?" "He kept throwing away the W's."

\*\*\* Nowadays, parents pray that the youngest child will get married and move out of the house before the oldest gets divorced and moves back in!

### FAMOUS LAST WORDS

You can put it together yourself in five minutes.

Believe me, nobody'll dress up.

We'll only stay five minutes.

One hot dog won't blow my diet.

You'll housebreak him in no time.

When it says empty, there's always a gallon or two left.

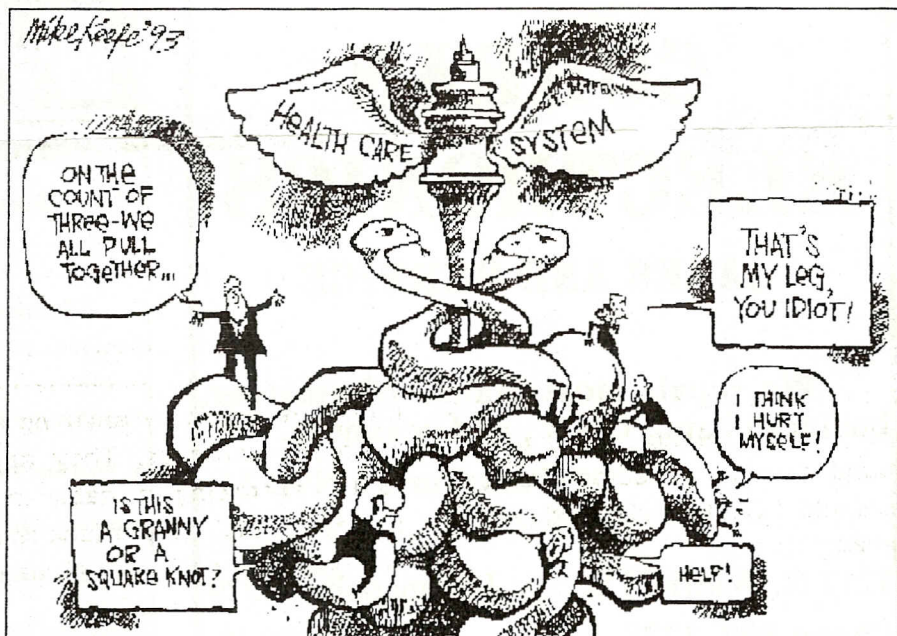
Of course, bring the kids.

We service what we sell.

Of course there's film in the camera.

Your table will be ready in five minutes.

General Custer: "Men, don't take prisoners!"





## BENS WEATHER TIPS

By Ben Woods Channel 8 TV

It may not officially be "commissioned" yet, but it is, making it's way into your homes via TV weathercasts. The "it" I'm referring to is the National Weather Service's new Next Generation Radar or NEXRAD for short. It also is called the WSR-88D. Alright, now that we've taken care of the names, what does it do?

First, the NEXRAD has more power and a narrower beam width. The result is greater range and higher definition of storms at all ranges. It will be of tremendous value to us forecasters for analyzing storms while they are still beyond our state borders.

In addition to the reflectivity images (which indicate intensity of precipitation), the NEXRAD produces a myriad of products including rainfall values, radial velocity (measuring wind speed and direction), echo tops, and more. This new radar is able to generate and archive so many products thanks to a powerful computer that runs the radar.

The only disadvantage to users is that the radar is not "live". Granted it may only be 3 to 9 minutes old, but when storms are moving fast that time delay could be significant. We are planning here at WISH-TV to provide NEXRAD over Amateur TV for the HAM's

YAESU  
ALINCO

KENWOOD

ICOM  
STANDARD

# R & L

## Electronics

The "Candy" Store for  
Central Indiana Hams!

8524 E. Washington St. Indianapolis 46219

Phone: (317) 897-7362

1-(800) 524-4889 Fax (317) 898-3027

severe weather net and storm chasers that utilize radar information.

We will continue to provide WISH-TV's live Doppler Radar on ATV. Of course so far in June there hasn't been too much to tack on any radar. The month has started out very dry and is predicted to end up below average. The official commissioning of the NEXRAD is scheduled to occur by late August. The national network of NEXRAD radars will likely take two to three years before it is established.

## CURRAN ELECTRONICS

### SALES AND SERVICE

We repair most brands of amateur,  
business band, CB's , and scanners.

Tom Curran N9DZJ

1217 N. Wittfield St. Indianapolis 46229

Phone 898-2338

Fax 898-2338

# MARC

## Mid-State Amateur Radio Club

Post Office Box 836 Franklin, In. 46131

Club Repeater: 146.835

Spark-Gap is published monthly and is available by first class mail to non-members for \$5.00 per year.

President: Roy Barnes N9PFZ

RACES: Joe Vergara KA9ZPA

V. President: Randy Shake KC9LC

ARES: Vernon Gill N9QBO

Secretary: Marilyn Parton N9TUK

Activities: Jack Parker NT9J

Treasurer: Mac McCarty NV9K

Rptr. Trustee: Dave Julian WB9YIG

Editor: Mac McCarty NV9K

Weather: Ben Woods Channel 8